

Appl. No. 10/027,721
Amdt.. Dated October 17, 2003
Reply to Office action mailed July 17, 2003 (Paper No. 9)

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A key cylinder for selectively locking and unlocking a lock mechanism, wherein the key cylinder has a rotor capable of being rotated by a key, and a lever for connecting the rotor to the lock mechanism, the key cylinder comprising:

a recess formed in an end of the rotor, wherein an end portion of the lever has a flange, which fits in the recess;

 a receiving portion formed in the recess, wherein the receiving portion receives the flange; and,

an elastic member located between an end surface of the flange and a bottom surface of the recess, wherein the elastic member holds the lever such that an axis of the lever and an axis of the rotor forms an angle within a predetermined range of angles, wherein the elastic member urges the flange to the receiving portion to contact with the receiving portion, and wherein the elastic member is mounted on a pin which projects from the end surface of the flange. 

~~Claim 2 (cancelled).~~

Claim 3 (previously presented): The key cylinder according to claim 1, wherein the flange has a contact surface, wherein the contact surface contacts the receiving portion and is perpendicular to the axis of the lever, wherein the receiving portion has a receiving surface, wherein the receiving surface receives the contact surface and is perpendicular to the axis of the rotor, and wherein the elastic member holds the lever such that the lever and the rotor are coaxial.

Claim 4 (previously presented): The key cylinder according to claim 1, wherein the elastic member is fixed to the flange.

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Claim 5 (original): The key cylinder according to claim 1 further comprising a protector for protecting the recess and the end portion of the lever.

Claim 6 (previously presented): The key cylinder according to claim 5 further comprising a rotor case, which holds the rotor, wherein the protector is cylindrical and body, which and extends from the rotor case.

Claim 7 (currently amended): A key cylinder comprising:

a rotor case;

a rotor located in the rotor case, an engagement portion being formed in the rotor, wherein the rotor is rotated in accordance with an operation of a key;

a back spring located about the rotor case, wherein the back spring is a coil spring wherein an end portions of the back spring engages within the engagement portion, wherein, when the rotor is rotated by the key, the back spring urges the rotor in a direction opposite to the direction of the rotation; and

a pair of guide portions formed in an end portion of the rotor, wherein, when the rotor is attached to the rotor case, the guide portions guide both end portions of the back spring to the engagement portion.

Claim 8 (previously presented): The key cylinder according to claim 7, wherein each of the guide portions is a surface that is inclined with respect to an axis of the rotor, wherein the end portion of the back spring is bent radially inward.

Claim 9 (cancelled).

Claim 10 (previously presented): The key cylinder according to claim 7, wherein the distance

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between the guide portions increases toward an end surface of the rotor and toward the radially outer surface of the rotor.

Claim 11 (currently amended): The key cylinder according to claim 7, wherein the guide portions are ~~a~~ first and second guide portions, wherein the rotor case has a ~~the~~ second guide portion, and wherein, when the back spring is attached to the rotor case, the second guide portion guides the back spring to a predetermined position in an axial direction of the rotor case and holds the back spring at the axial position.

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Claim 12 (currently amended): An assembly method of a key cylinder including:

mounting a back spring to an engage portion of a rotor case; and
inserting a rotor, which rotates in accordance with an operation of a key, into the rotor case, wherein both end portions of the back spring are guided to an engagement portion, which is formed in the rotor, along a pair of guide portions of the rotor and wherein, when a rotor is rotated by a key, the back spring urges the rotor in a direction opposite to the direction of the rotation.

Claims 13-17 (withdrawn).
